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A method for encrypting an electronic message composed by a sender using an abbreviated address book for delivery over a mail system to a recipient who holds a digital certificate, comprising:

- (a) when the sender is off-line, inserting an encryption flag in a header associated with the electronic message;
- (b) placing the header and the message in plain text in an outbox;
- (c) when the sender is on-line, in response to the flag, requesting the digital certificate from the mail system; and
- (d) using the received certificate to encrypt the plain text mail message.

1 2. The method according to claim 1 further comprising:

- (e) sending the encrypted mail message to the mail system.

1 3. The method according to claim 1 further comprising:

- (f) when the sender is on-line, if the flag indicates that the message is encrypted, sending the encrypted mail message to the mail system.

1 4. The method according to claim 1 wherein step (c) comprises:

- (c1) requesting the digital certificate from the mail system; and
- (c2) if the certificate is unavailable, informing the sender that the message cannot be encrypted.

1 5. The method according to claim 4 further comprising:

- (g) sending the unencrypted mail message in the outbox to the mail system when the message cannot be encrypted.

- 1 6. The method according to claim 1 wherein the header comprises information
2 identifying the recipient and step (c) comprises:
3 (c3) using the identifying information to locate the recipient in the mail system
4 and to retrieve the certificate.
- 1 7. Apparatus for encrypting an electronic message composed by a sender using an
2 abbreviated address book for delivery over a mail system to a recipient who
3 holds a digital certificate, comprising:
4 a mail composer which inserts an encryption flag in a header associated
5 with the electronic message when the sender is off-line;
6 a sending mechanism which places the header and the message in plain
7 text in an outbox;
8 a verification mechanism which is operable when the sender is on-line
9 and, in response to the flag, requests the digital certificate from the mail system;
10 and
11 an encryption mechanism which uses the received certificate to encrypt
12 the plain text mail message.
- 1 8. The apparatus according to claim 7 further comprising:
2 an outbox mechanism which sends the encrypted mail message to the mail
3 system.
- 1 9. The apparatus according to claim 7 further comprising:
2 a mail mechanism which operates when the sender is on-line and, if the
3 flag indicates that the message is encrypted, sends the encrypted mail message
4 to the mail system.
- 1 10. The apparatus according to claim 7 wherein the verification mechanism
2 comprises:

3 a mechanism which requests the digital certificate from the mail system;
4 and
5 warning apparatus which informs the sender that the message cannot be
6 encrypted if the certificate is unavailable.

- 1 11. The apparatus according to claim 10 further comprising:
2 An outbox mechanism which sends the unencrypted mail message in the
3 outbox to the mail system when the message cannot be encrypted.

1 12. The apparatus according to claim 7 wherein the header comprises information
2 identifying the recipient and wherein the verification apparatus comprises:
3 a locator which uses the identifying information to locate the recipient in
4 the mail system and to retrieve the certificate.

1 13. A computer program product for encrypting an electronic message composed by
2 a sender using an abbreviated address book for delivery over a mail system to a
3 recipient who holds a digital certificate, the computer program product comprising
4 a computer usable medium having computer readable program code thereon,
5 including:
6 program code operable when the sender is off-line, for inserting an
7 encryption flag in a header associated with the electronic message;
8 program code for placing the header and the message in plain text in an
9 outbox;
10 program code operable when the sender is on-line and, in response to the
11 flag, for requesting the digital certificate from the mail system; and
12 program code for using the received certificate to encrypt the plain text
13 mail message.

1 14. The computer program product according to claim 13 further comprising:

- 2 program code for sending the encrypted mail message to the mail system.
- 1 15. The computer program product according to claim 13 further comprising:
2 program code operable when the sender is on-line and, if the flag
3 indicates that the message is encrypted, for sending the encrypted mail message
4 to the mail system.
- 1 16. The computer program product according to claim 13 wherein the program code
2 for requesting the certificate comprises:
3 program code for requesting the digital certificate from the mail system;
4 and
5 program code for informing the sender that the message cannot be
6 encrypted, if the certificate is unavailable.
- 1 17. The computer program product according to claim 16 further comprising:
2 program code for sending the unencrypted mail message in the outbox to
3 the mail system when the message cannot be encrypted.
- 1 18. The computer program product according to claim 13 wherein the header
2 comprises information identifying the recipient and the program code for
3 requesting the certificate comprises:
4 program code for using the identifying information to locate the recipient in
5 the mail system and to retrieve the certificate.
- 1 19. A computer data signal embodied in a carrierwave for encrypting an electronic
2 message composed by a sender using an abbreviated address book for delivery
3 over a mail system to a recipient who holds a digital certificate, the computer
4 data signal comprising:

5 program code operable when the sender is off-line, for inserting an
6 encryption flag in a header associated with the electronic message;
7 program code for placing the header and the message in plain text in an
8 outbox;
9 program code operable when the sender is on-line and, in response to the
10 flag, for requesting the digital certificate from the mail system; and
11 program code for using the received certificate to encrypt the plain text
12 mail message.

- 1 20. The computer data signal according to claim 19 further comprising:
2 program code for sending the encrypted mail message to the mail system.